

Fig. 1



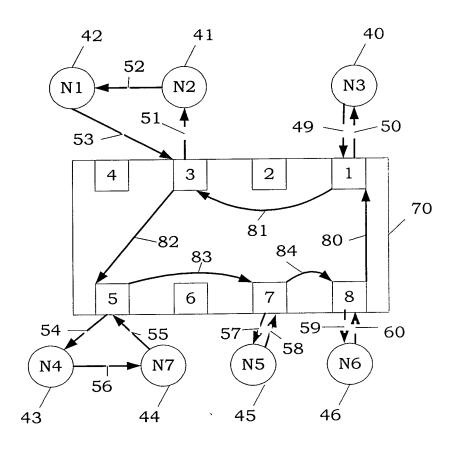
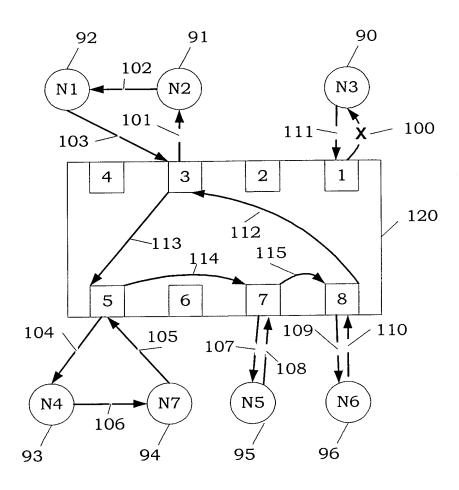


Fig. 2





Fibre Channel Arbitrated Loop Hub

Fig. 3



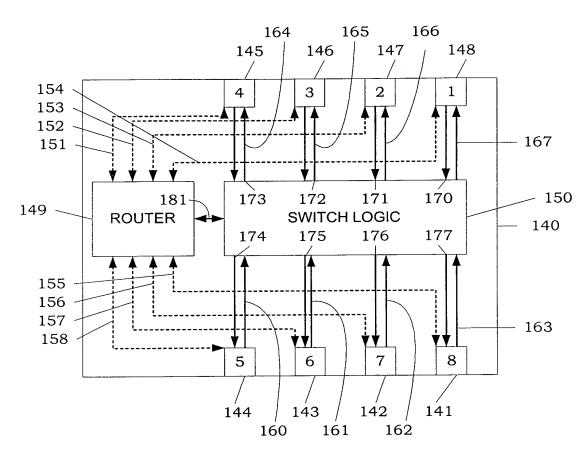


Fig. 4



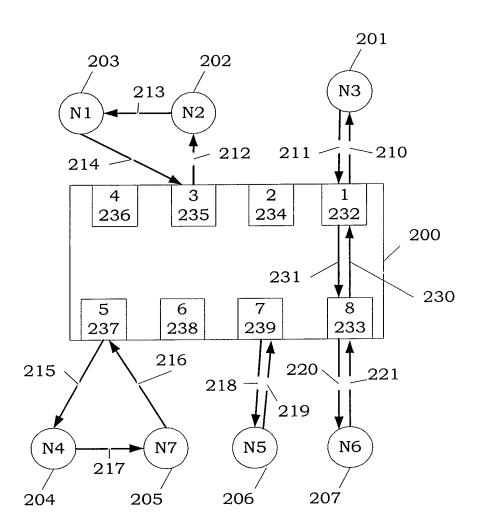


Fig. 5



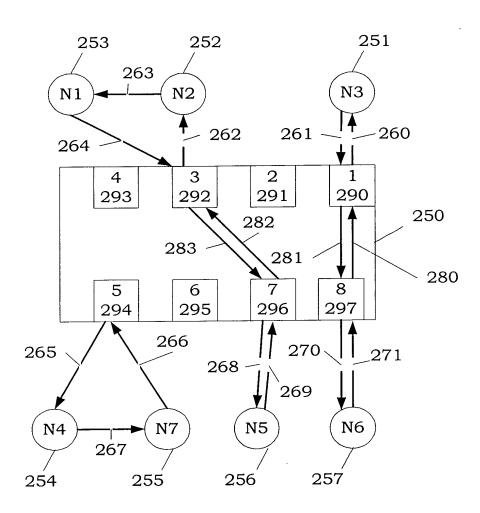
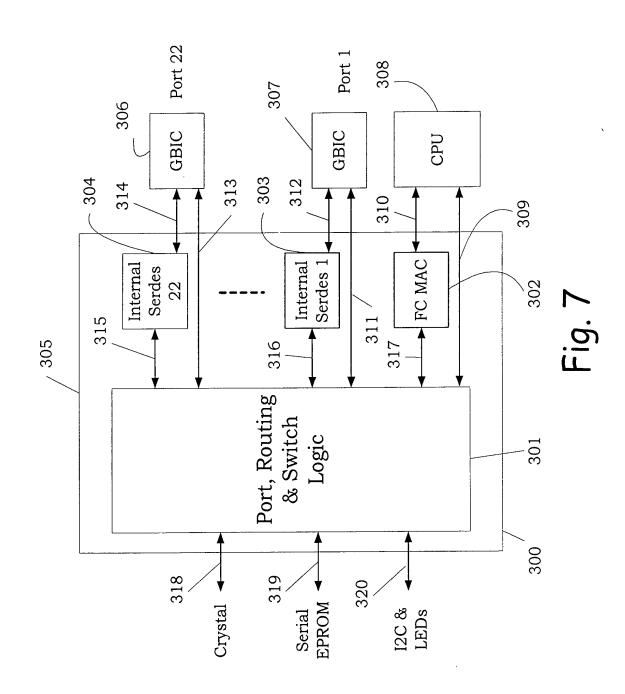


Fig. 6







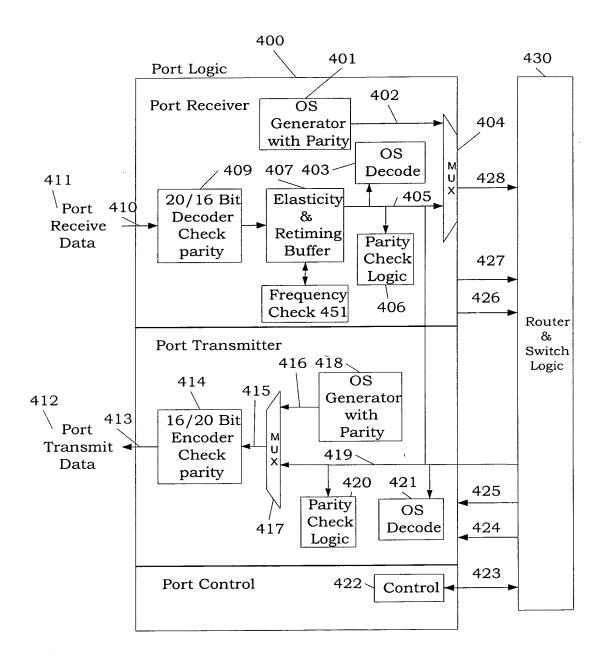


Fig. 8



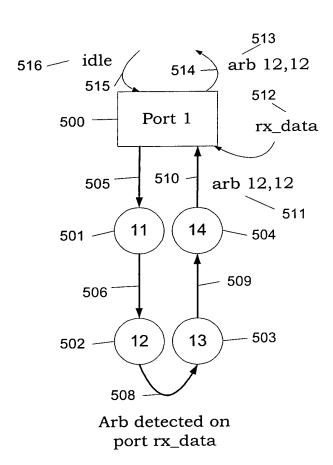
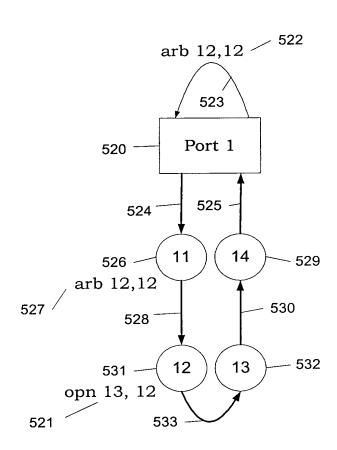


Fig 9a



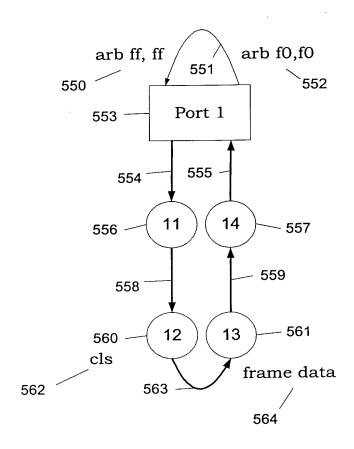


Connection established.

Open sourced

Fig 9b

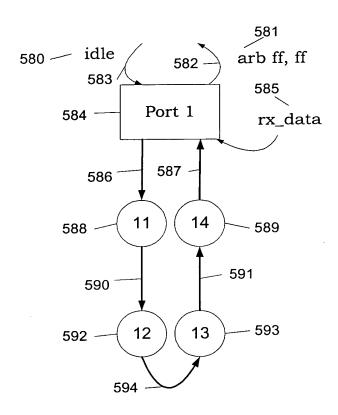




Arbf0 replaced with Arbff. Data Transfered. Close sourced.

Fig 9c

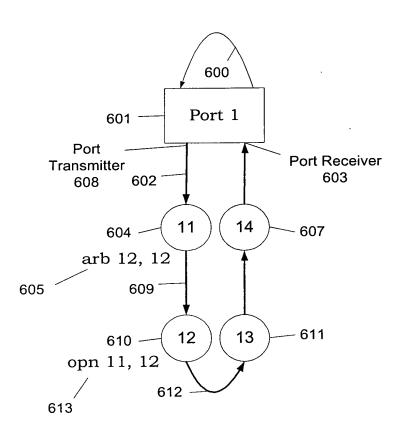




Arbff detected on port rx\_data.
Disconnect. Source idles

Fig 9d

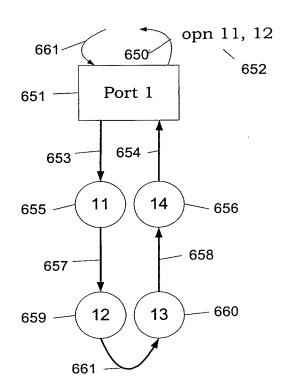




Arbs forwarded. Open sourced.

Fig 10a





Open detected at port receiver.

Port receiver holds open.

Provides ALPA to router and asserts opn\_connect\_req.

Fig 10b



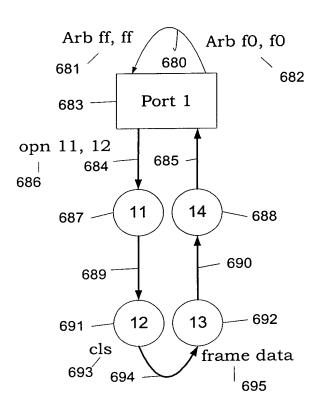
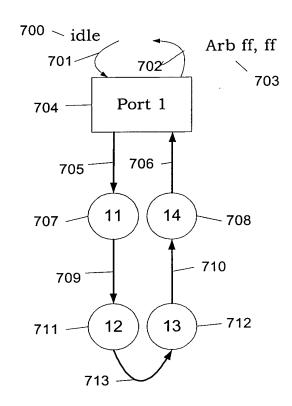


Fig 10c

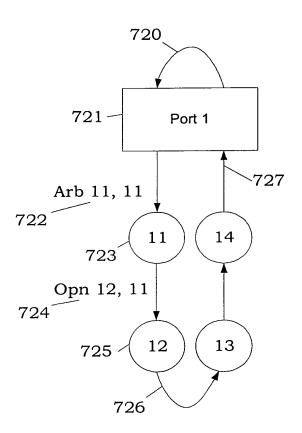




Arbff detected on port rx\_data. Disconnect. Source idles.

Fig 10d

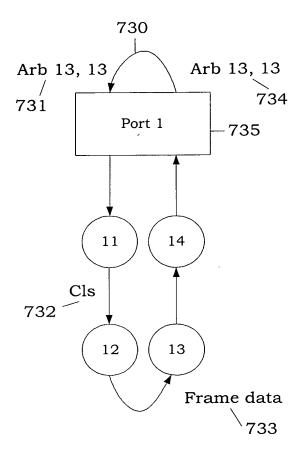




Arbs forwarded. Open Sourced.

Fig 11a

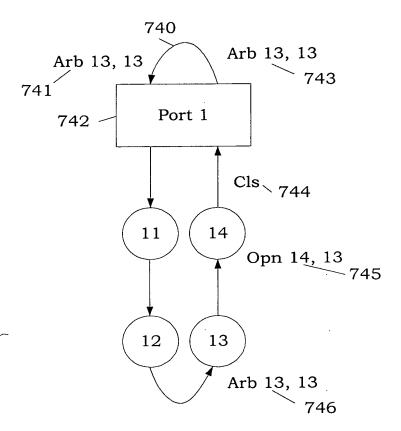




Arb 13 forwarded. Data Transfered. Close sourced.

Fig 11b

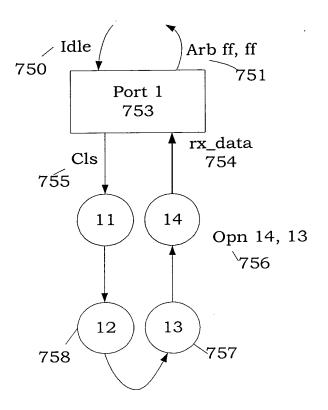




Close forwarded by node 12. Arb 13 received by node 13. Open sourced by node 13.

Fig 11c





Close source by node 13.
Forwarded by node 12.
Arb ff Detected on port rx\_data.
Disconnect.
Source idles.

Fig 11d



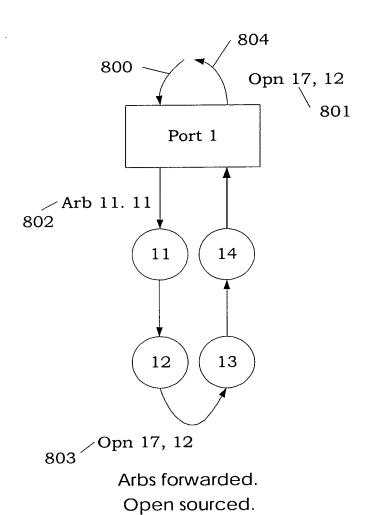
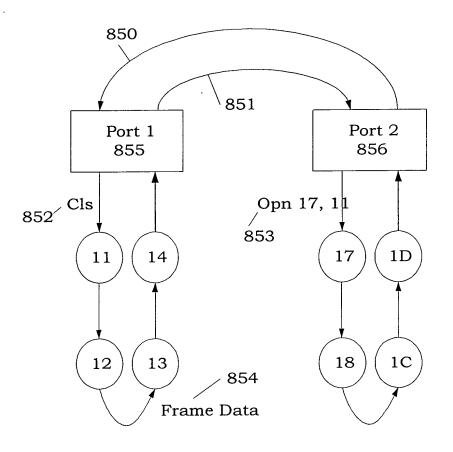


Fig 12a





Open forwarded to Port 2.

Data transferred.

Close sourced.

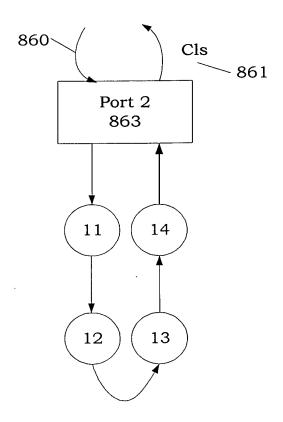
Open received from Port 1.

Data received.

Close forwarded.

Fig 12b





Close detected at transmillter and receiver.
Connection broken.

Fig 12c



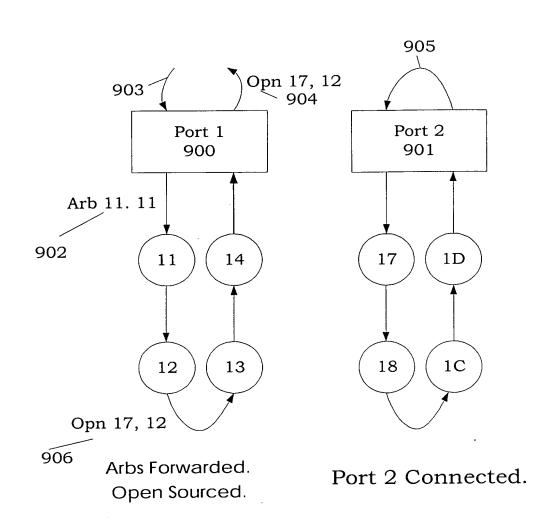
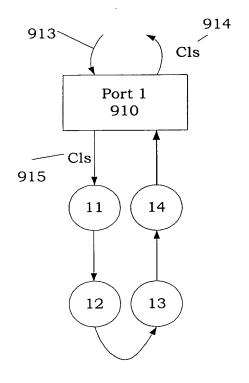
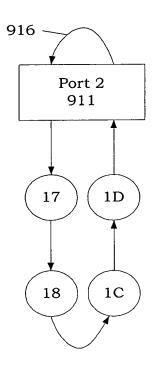


Fig 13a







Cls detected at port receiver from node 12.
Cls sourced from port transmitter.

Port 2 still connected.

Fig 13b



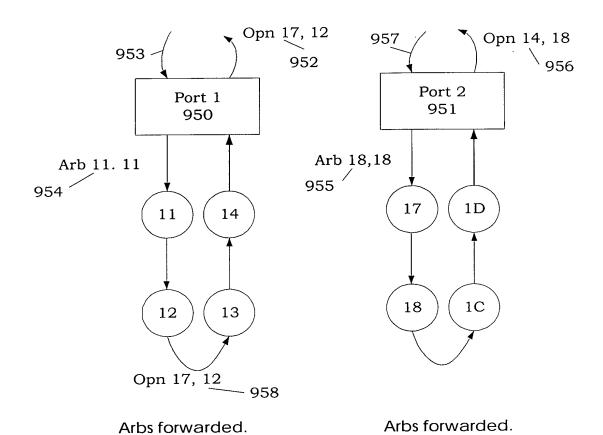
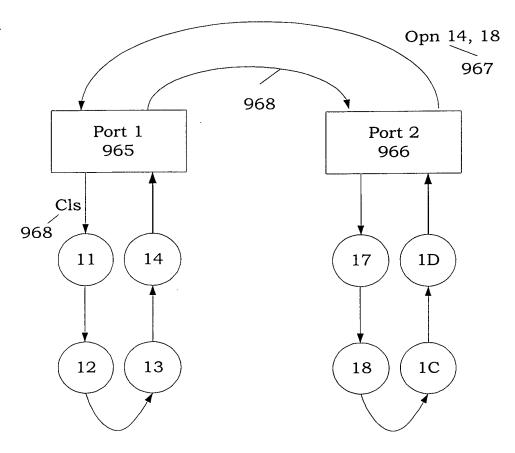


Fig 14a

Open sourced.

Open sourced.





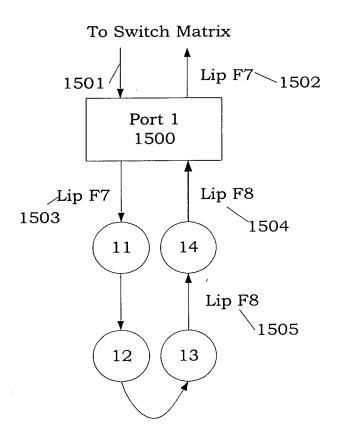
Port 1 connected as destination port.
Cls sourced from Port 1 transmitter.

Port 2 connected as source Port. Open sourced from Port 2 receiver.

Fig 14b



Router detects Lip RX'd signal. Router deasserts switched mode signal.

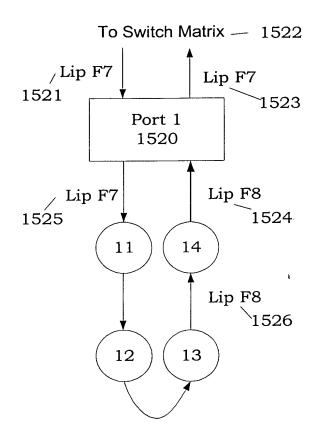


Lip F8 sourced by node 13.
Lip F8 replaced by Lip F7 at port receiver.
Lip F7 sourced at port transmitter.

Fig 15a



Router detects deassertion of port active. Router takes port out of operational loop.



Lip F7 received at port transmitter. Port deasserts port active signal.

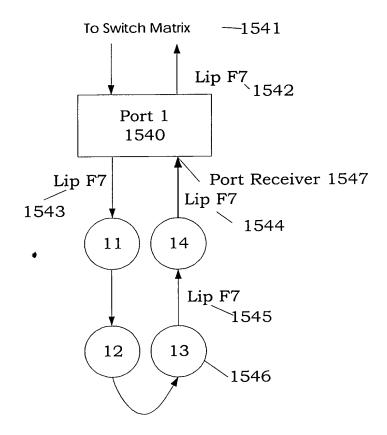
Fig 15b

i



Router detects Lip RX'd signal since port active is now asserted.

Router puts port back into the operaional loop.

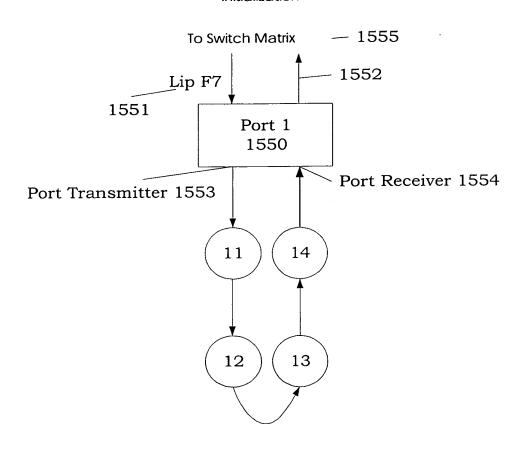


Node 13 "heals", source Lip F7. Lip F7 received at port receiver. Port asserts Port\_Active.

Fig 15c



## Router continues with loop initialization



Port detects Lip F7 at port transmitter.
Port stops sourcing Lip F7 at port receiver.
Port stops sourcing Lip F7 at port transmitter.

Fig 15d



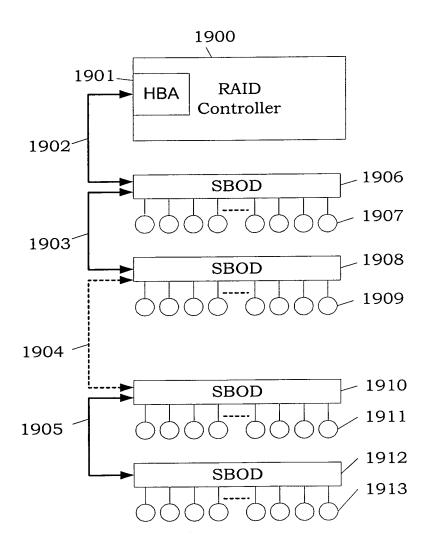


Fig. 16a



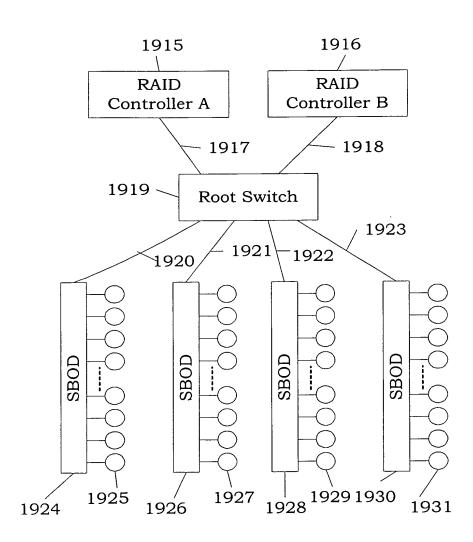


Fig. 16b



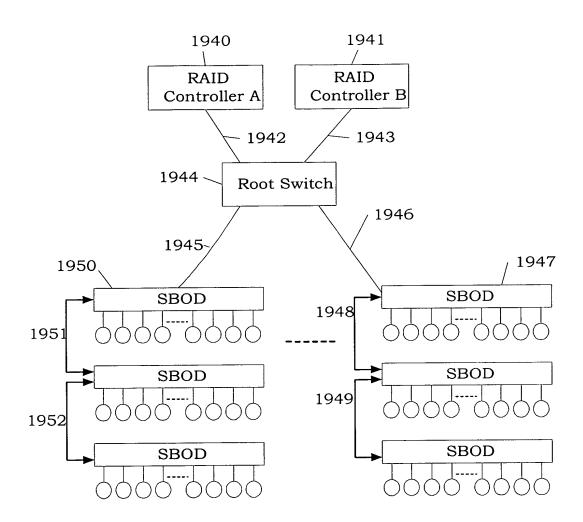


Fig. 16c



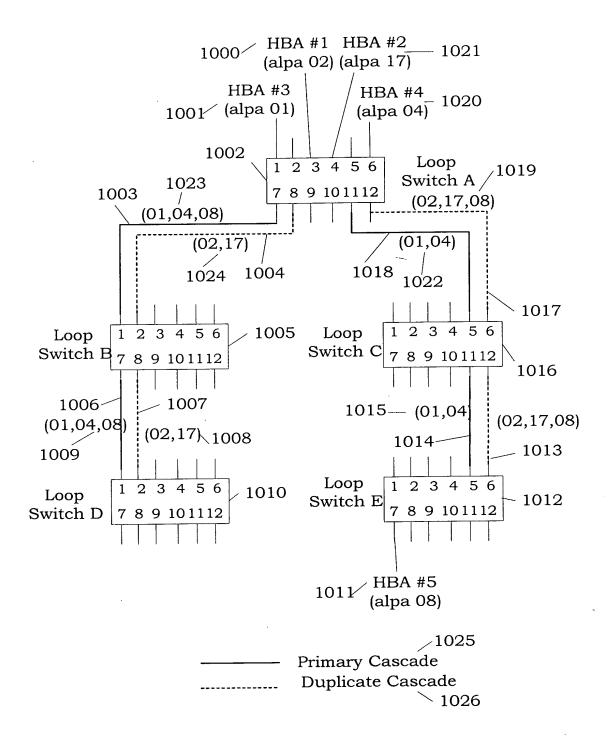


Fig. 17



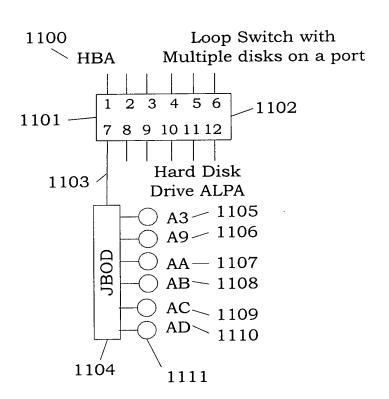
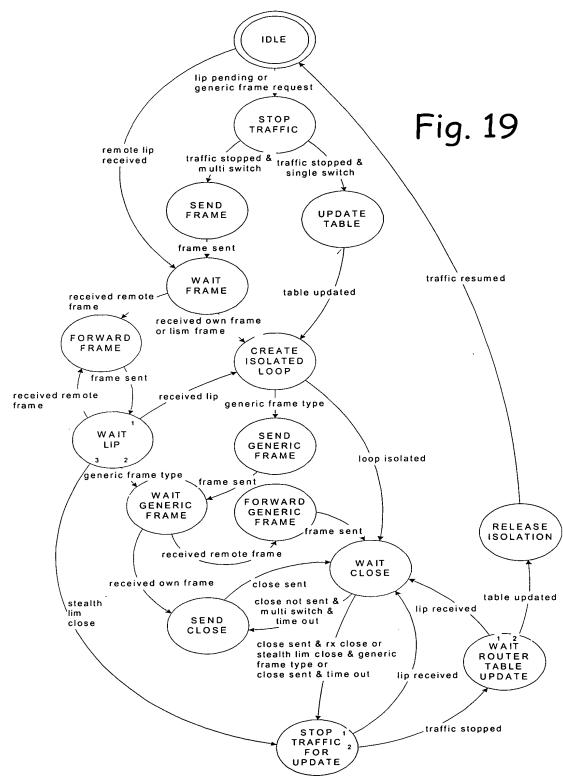
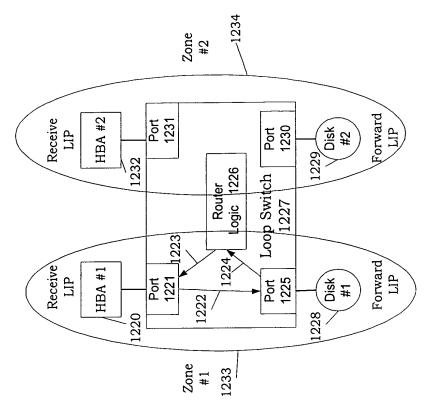


Fig. 18









1206

Router Logic 1208 Port 1213

Loop Switch 1202

Port 1212

Receive LIP

Receive LIP 1209 HBA #2

1200 | HBA #1

Port 1210

Port 1211

1207

1201 1203

Fig. 21

Fig. 20

Forward LIP

Forward LIP

Disk #2

Disk

1204



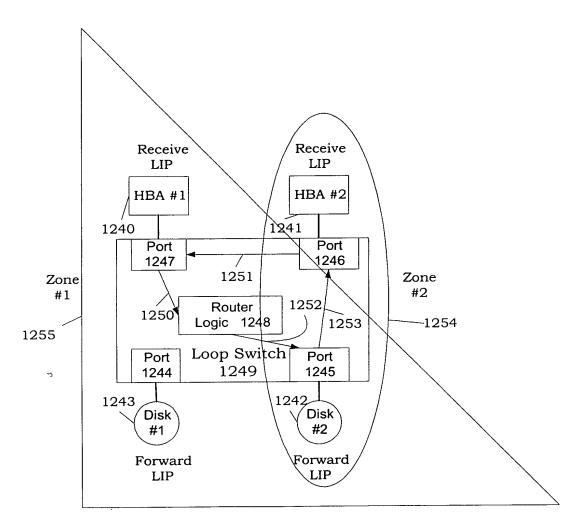


Fig. 22



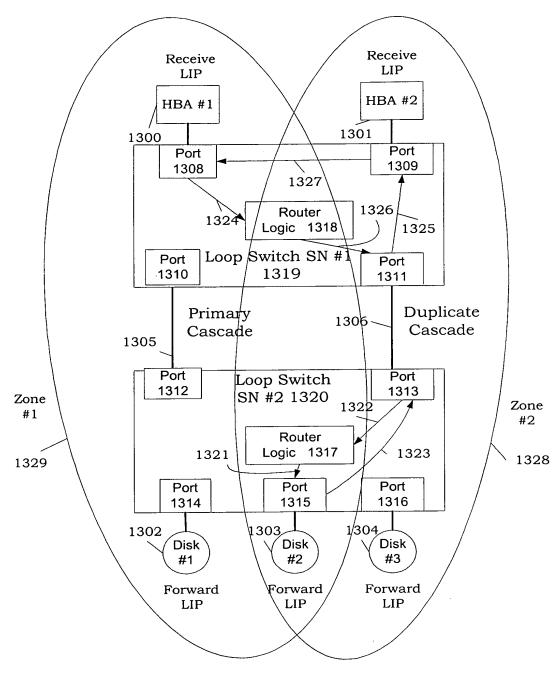


Fig. 23



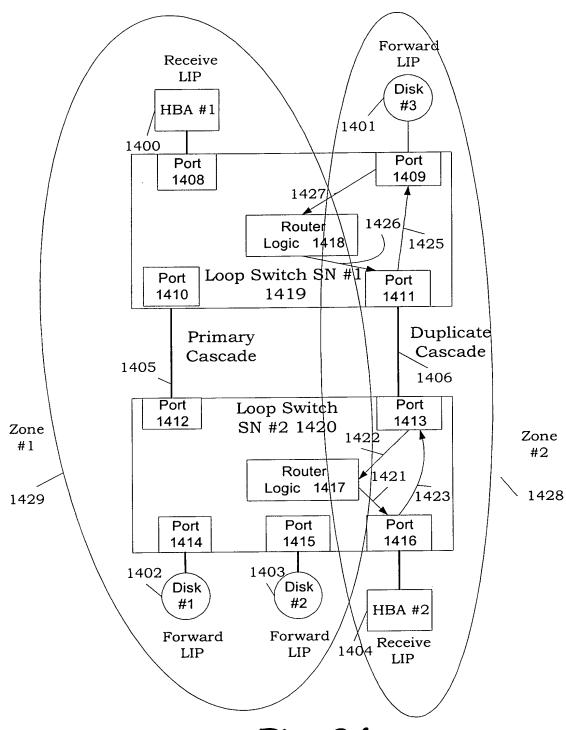


Fig. 24



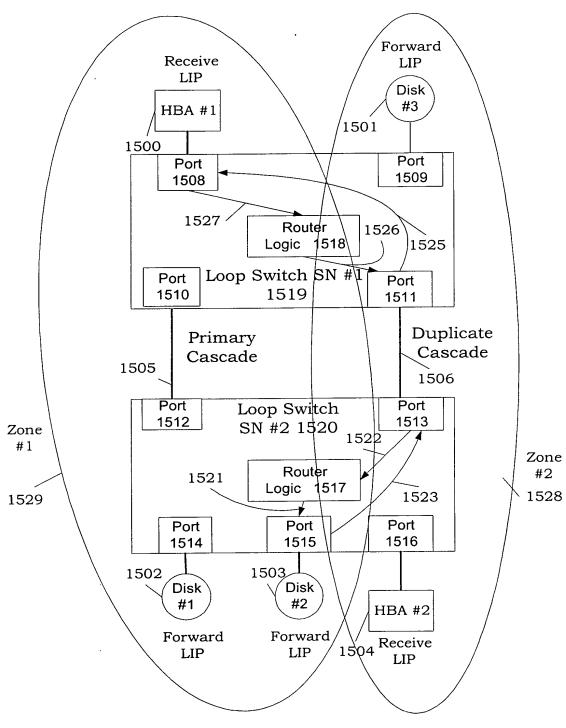


Fig. 25



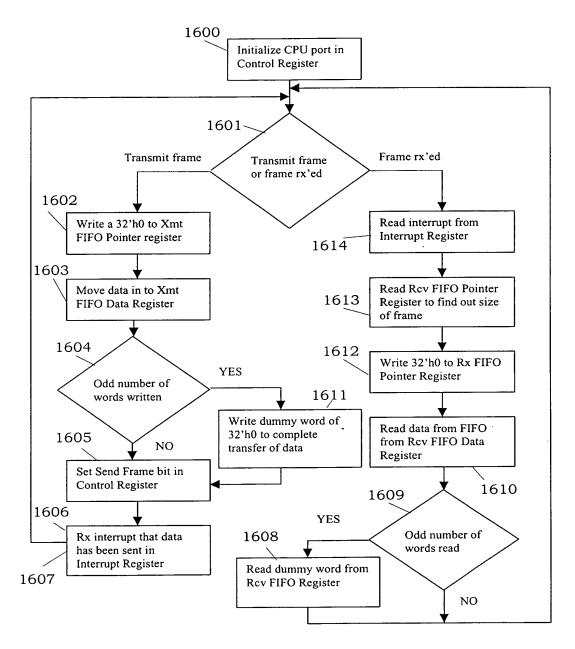


Fig. 26



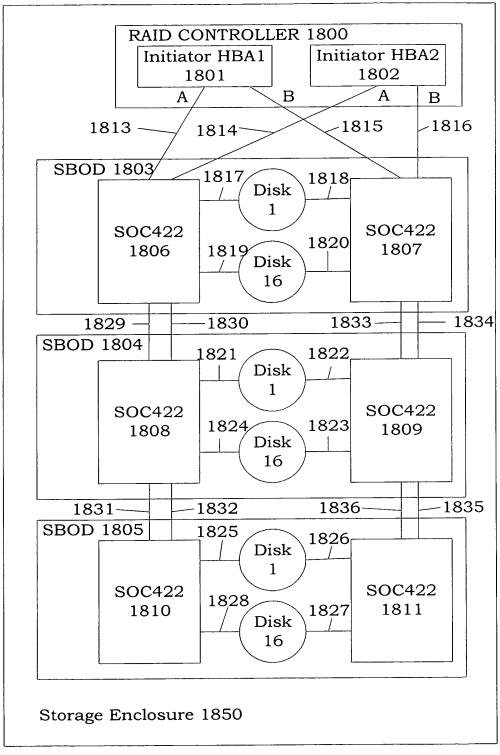


Fig. 27



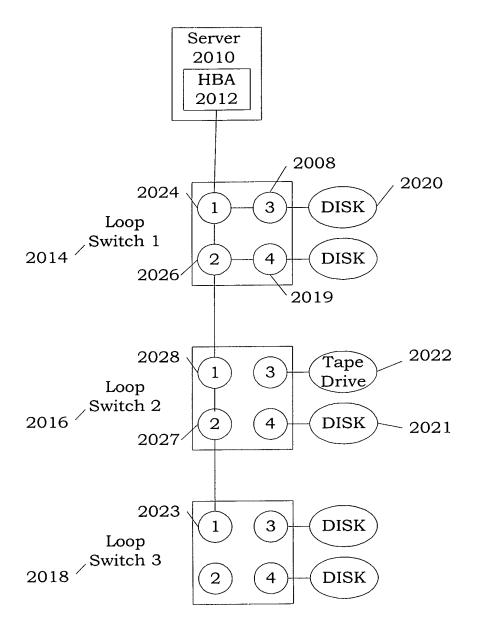


Fig. 28



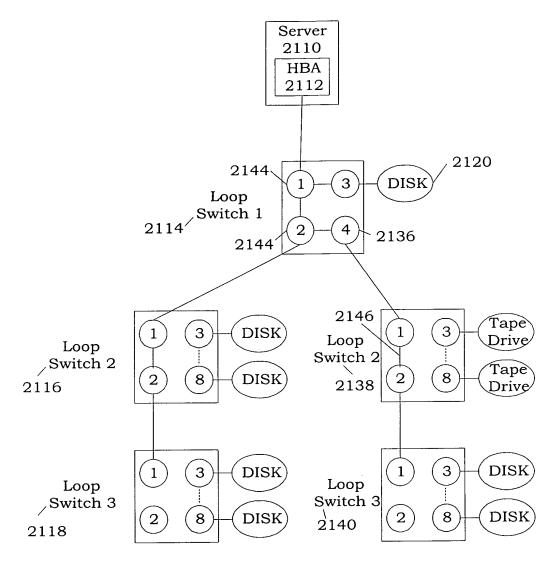


Fig. 29



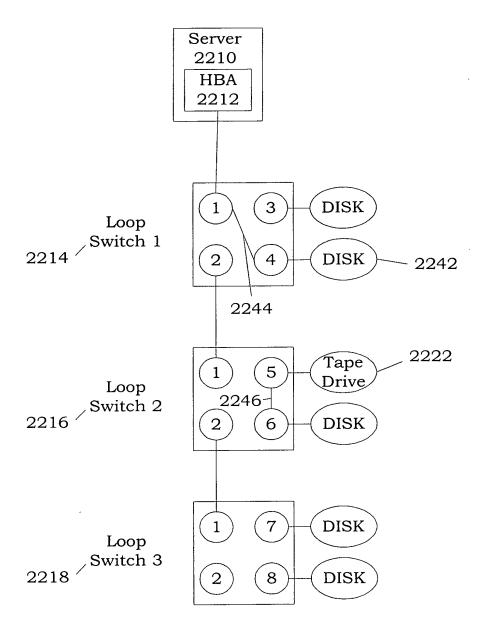


Fig. 30



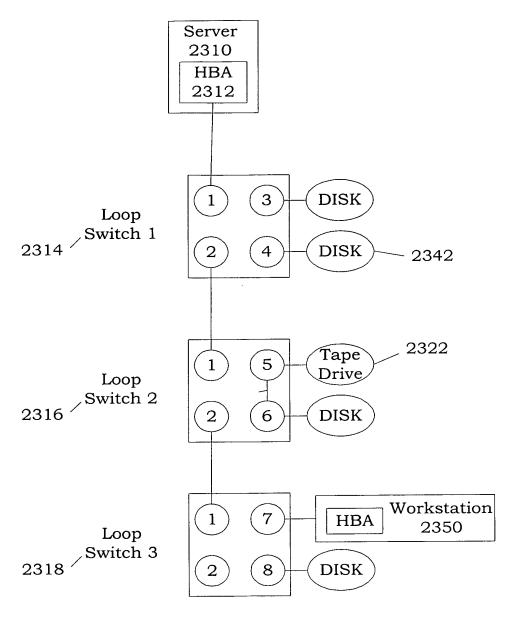


Fig. 31



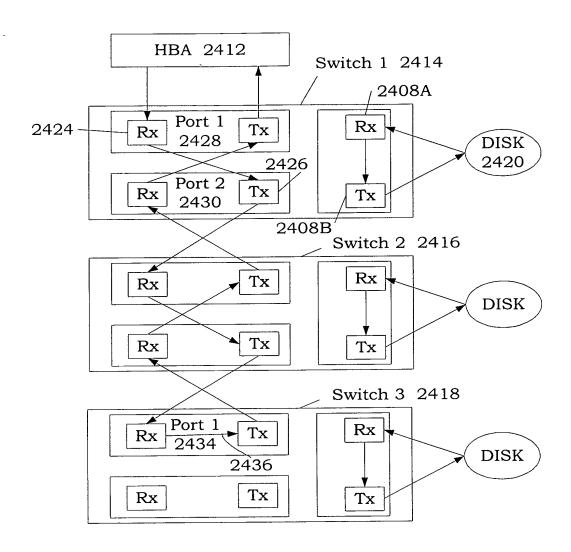


Fig. 32



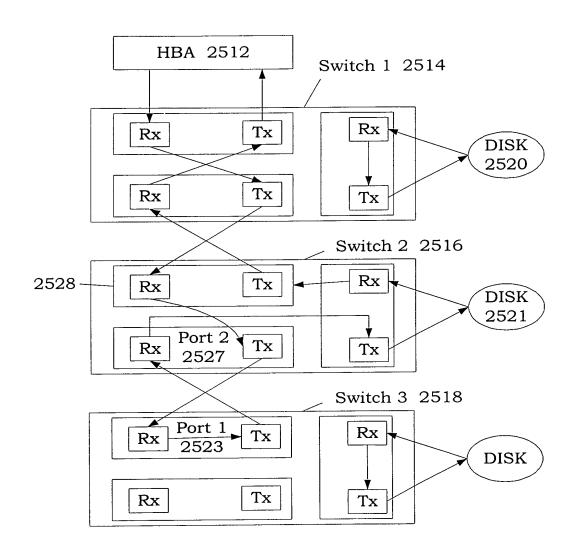


Fig. 33



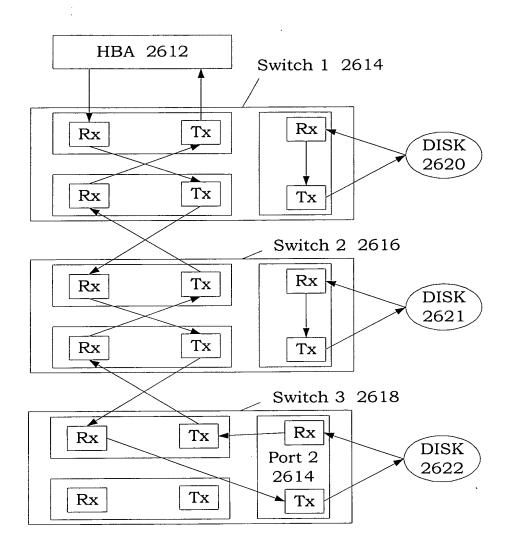


Fig. 34



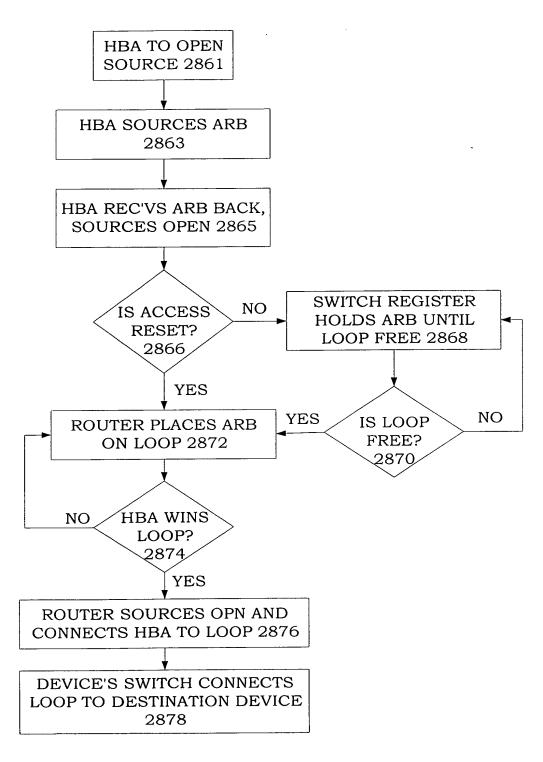


Fig. 35